121) (SEQ ID NO:1); and R_2 (SEQ ID NO:3) and the products of their condensation.

Figure 3 illustrates the CE chromatogram of a urodilatin production batch produced according to the methods of the prior art.

Figure 4 illustrates the CE chromatogram of a urodilatin production batch produced according to the method of the present invention.

Figure 5 illustrates the purification of urodilatin and the separation of impurities by high performance liquid chromatography.

Figure 6 illustrates the inability to separate impurities from urodilatin according to conventional purification methods using trifluoroacetic acid.--

IN THE CLAIMS:

Please cancel claim 1 without prejudice or disclaimer.

Please add the following new claims to the application.

--21. A process for purifying a linear or cyclic cardiodilatin fragment R^1-ANP(105-121) -R^2 having a total chain length of 17-37 amino acids, wherein

ANP (105-121) is the amino acid sequence according to SEQ ID NO:1,

R^1 is absent or the amino acid sequence ANP (90-104) (SEQ ID NO:2) or fragments thereof, and

R^2 is absent or the amino acid sequence ANP(122-126) (SEQ ID NO:3) or fragments thereof, comprising the steps of

loading a crude product containing said cardiodilatin fragment R^1-ANP(105-121) -R^2 on a reversed-phase HPLC column, and

eluting said cardiodilatin fragment R^1-ANP(105-121) -R^2 with a buffer system

containing triethylammonium phosphate and acetonitrile.

22. The process according to claim 21, wherein elution is performed at a pH value of between 2-5.

23. The process according to claim 22, wherein said elution is performed at a pH value of between 2-3.

24. The process according to claim 21, further comprising equilibrating the reversed-phase HPLC column with a triethylammonium phosphate buffer prior to loading said crude product containing said cardiodilatin fragment R^1-ANP(105-121) -R^2, wherein said cardiodilatin fragment R^1-ANP(105-121) -R^2 is eluted by continuous charging of a buffer mixture of triethylammonium phosphate in water and acetonitrile (2:3 v/v) in a continuous gradient.

25. The process according to claim 21, wherein R^1 is a fragment selected from the group consisting of ANP(95-104), ANP (99-104) and ANP(102-104).

26. The process according to claim 21, wherein R^2 is a fragment selected from the group consisting of ANP(122-125), and ANP (122-126).

27. The process according to claim 21, wherein said process produces a cardiodilatin fragment R^1-ANP(105-121) -R^2 selected from the group consisting of

ANP(95-126), ANP(99-126), ANP (102-126) and ANP(103-126).

28. A cardiodilatin fragment R^1-ANP(105-121) -R^2 having a total chain length of 17-37 amino acids, wherein ANP (105-121) is the amino acid sequence according to SEQ ID NO:1, R^1 is the amino acid sequence ANP(90-104) or a fragment thereof, and R^2 is the amino acid sequence ANP(122-126) or a fragment thereof, wherein said cardiodilatin fragments have a purity of at least 99% and exhibit a single migration peak in a purity analysis using capillary electrophoresis.

29. The cardiodilatin fragments according to claim 28, wherein R^1 is a fragment selected from the group consisting of ANP(95-104), ANP (99-104) and ANP(102-104).

30. The cardiodilatin fragments according to claim 28, wherein R^2 is a fragment selected from the group consisting of ANP(122-125), and ANP (122-126).

31. The cardiodilatin fragments according to claim 28, wherein said fragments are selected from the group of ANP(95-126), ANP(99-126), ANP (102-126) and ANP(103-126).

32. A pharmaceutical composition which has natriuretic activity, comprising the cardiodilatin fragment according to claim 28 in combination with physiologically